

## **REMARKS/ARGUMENTS**

### **Amendment to the Claims**

Claims 3-7, and 21-27 are pending in this application. No claims stand allowed.

Claim 21 has been amended for further prosecution. The support for the amendment may be found in the present specification, page 34, paragraph [0071] through page 35, paragraph [0073].

New claims 23-27 have been added by this amendment. The support for the new claims may be found in the present specification, page 5, paragraph [0009]-[0010], page 34, paragraph [0071] through page 35, paragraph [0073], and in original claims.

No new matter has been introduced by this amendment.

### **Amendment to the Specification**

The specification has been amended to reinstate original paragraph [0025] and to correctly amend paragraph [0027] as intended in the previous amendment of November 18, 2005.

No new matter has been introduced by this amendment.

### **Double Patenting Rejection**

Claim 21 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being allegedly unpatentable over certain claims of each one of the following copending applications and issued patents, as listed below, in view of *Hulvey* (U.S. Patent 5,940,137), *Rogers et al.* (U.S. Patent 5,786,844) and *Clark* (U.S. Patent 5,949,437):

Claims 1, 7 and 13 of Application No. 10/726,350;

Claims 1-2, 7-8, and 13-14 of Application No. 10/726,362;

Claims 1, 12, and 23 Application No. 10/726,440;

Claims 1, 3, 8, 10, 15, and 17 of Application No. 10/726,441;

Claims 1, 3, 21, 23, and 41 of Application No. 10/726,794;

Claims 1, 5, 9, and 13-15 of U.S. Patent No. 7,088,741;

Claims 1, 6, 9, and 27 of U.S. Patent No. 7,068,686; and

Claims 1 and 19 of U.S. Patent No. 7,177,329.

Submitted herewith as a separate paper is a terminal disclaimer for the present application with respect to the above identified patent applications and issued patents, in order to obviate the nonstatutory obviousness-type double patenting rejections.

**Rejections of Claims under 35 U.S.C. § 103:**

Claim 21 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Kori* (U.S. Patent 6,963,968) in view of *Hulvey* (U.S. Patent 5,940,137), *Rogers et al.* (U.S. Patent 5,786,844) and *Clark* (U.S. Patent 5,949,437). In addition, claim 22 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Kori*, *Hulvey*, *Rogers*, and *Clark* as applied to Claim 21, and further in view of *Kim* (U.S. Patent 6,577,303). Applicant respectfully disagrees for the reasons set forth below. The Examiner relied upon Hulvey to teach self clocked signaling, however, Hulvey specifically teaches using a transmitted **analog** video signal (Abstract). Moreover, the data is encoded into the video data which must then be decoded at the receiver, thereby reducing the bandwidth available for sending video data only since both video data and encoded data are intermingled and transmitted over a single signal line thereby commensurably reducing the bandwidth available for video data.

Claim 21, as amended, defines a **packet based** method of coupling a multimedia source device to a multimedia sink device using a packet based video data stream wherein any control signals are passed over the auxiliary channel only leaving the uni-directional main link bandwidth fully available for transmission of video data only thereby greatly increasing the available bandwidth over that possible with Hulvey. In this way, the unidirectional main link is dedicated to transmission of video data and all other data is relegated to the auxiliary channel. The claimed method comprises, among others, automatically configuring the coupling device, which includes (a) determining if the multimedia source device supports only analog data, (b) setting an operational mode of the coupling device to analog if the multimedia source device supports only analog data, (c) determining if the multimedia sink device supports only analog data, (d) setting the operational mode of the coupling device to analog if the multimedia source device supports only analog data, and (e) setting the operational mode of the coupling device to digital if both of the multimedia source device and the multimedia sink device support digital data, as recited in claim 21 as amended.

The Examiner acknowledges that *Kori* fails to teach, among others, using an enhanced analog mode having differential analog video with embedded alignment signal and bi-directional sideband when either one of both the multimedia source device or the multimedia sink device are determined to be analog in nature. However, the Examiner alleges that *Hulvey* teaches transferring a self-clocked signal (the alleged embedded alignment signal) and *Rogers* teaches utilizing a sideband. The Examiner further alleges that *Clark* teaches “automatic determining the monitor (i.e., multimedia sink device) is analog or digital,” citing Fig. 6, column 5, line 49 to column 6, line 14 thereof. With respect to claim 22, although the Examiner admits that the combination of *Kori*, *Hulvey*, *Rogers*, and *Clark* does not teach “the method comprising using multimedia source device identification data retrieved from the multimedia source device to determine the analog nature of the multimedia source device,” the Examiner alleges that *Kim* teaches a controller “making an automatic determination of whether the video source is an analog video source or digital video source,” citing Fig. 1, ref. 8 and column 4, lines 43-48 thereof.

Applicant respectfully disagrees with respect to the teaching of *Clark* and *Kim* as discussed below.

#### Regarding Clark

*Clark* relates to a graphics system having multiple displays 20 and 22 supported by a single frame buffer 18 thereby reducing hardware requirement and cost (see Abstract thereof). In *Clark*’s system, however, the multiple displays 20 and 22 must be “of the same type,” that is, either both analog (e.g. CRT monitors) or both digital (e.g. LCD flat panel displays) (see column 4, lines 45-47 thereof). *Clark* only teaches driving two analog CRT monitors (FIG. 3, column 4, line 49 to column 5, line 14) or driving two digital LCD flat panel displays (FIG. 4, column 5 lines 15-33). Even in its two-chip embodiment (FIG. 5, column 5, lines 34-48), *Clark* drives two displays of the same type (analog CRT monitors). That is, *Clark*’s system is designed to output two (or multiple) display signals of the same type, where the type of output (analog or digital) is predetermined by a specific implementation. It should be noted that although *Clark* uses the same reference number 16 for the graphics circuitry, the graphics circuitry 16 has different and fixed configuration in each embodiment. *Clark*’s system (a given device) is adapted for one of a digital monitor or an analog monitor, but not for the both (see column 6, line 47-50 thereof). In other words, one device of *Clark* can be adapted for digital monitors, and another for analog monitors, but the same device of *Clark* cannot be adapted for both types of monitors, i.e., it is not

configurable. It should also be noted that FIG. 6 illustrates two different implementations (FIGS. 3 and 4) in one flow chart, and that is why it includes step 68 to separate two different implementations. Thus, *Clark's* step 68 (column 6, lines 1-2 thereof) does not suggest the system's determining the type of monitors (the alleged multimedia sink device). Accordingly, *Clark's* system neither determines whether the monitor is analog or digital, nor changes any operation mode of the graphics circuitry 16.

*Clark* also fails to teach or suggest "making an automatic determination of whether the video source is an analog video source or digital video source" as the Examiner correctly noted in the Office Action.

Accordingly, *Clark* fails to teach or suggest automatically configuring the coupling device, which includes (a) determining if the multimedia source device supports only analog data, (b) setting an operational mode of the coupling device to analog if the multimedia source device supports only analog data, (c) determining if the multimedia sink device supports only analog data, (d) setting the operational mode of the coupling device to analog if the multimedia source device supports only analog data, and (e) setting the operational mode of the coupling device to digital if both of the multimedia source device and the multimedia sink device support digital data, as recited in claim 21.

#### Regarding *Kim*

*Kim* relates to determining a type of Digital Visual Interface (DVI) connected to a digital video display device. *Kim's* system is provided between the DVI connector and the display panel, i.e., within a digital video display device (see FIG. 3 thereof), which includes a DVI receptacle (see column 10, lines 22-24 thereof). Depending on the type of the DVI connector, *Kim's* controller 8 operates the digital video display device (see column 4, lines 53-54 thereof) by controlling a video signal switch 30 (see column 6, lines 6-23 thereof). That is, *Kim's* system only configures the operation of the digital video display, not a coupling device, if any.

Furthermore, although *Kim's* controller 8 (the digital video display device) may determine if the input signal is an analog signal or digital signal (see column 4, lines 36-48 thereof), this input signal determination is performed regardless of whether the DVI-D type connector or the DIV-I type connector is connected (column 4, lines 34-35 of *Kim*) in order to

selectively display the analog video signal and the digital video signal on the screen (column 4, lines 42-43 of *Kim*). This means that *Kim*'s input signal detection is again to control the display operation of the digital video display device, not a coupling device, if any. Accordingly, *Kim* fails to teach or suggest configuring the coupling device as claimed in claim 21.

Also, it should be noted that detecting an analog input signal does not mean that the video source device supports only analog data, because a video source device which supports both analog and digital data may output an analog signal.

In addition, *Kim*'s video signal switch 30 always outputs a digital signal regardless of whether it operates in the analog mode or the digital mode (see column 6 lines 7-10 of *Kim*). This is because *Kim*'s system is only implemented in a digital vide display device, and thus there is no possibility for *Kim*'s system to be used for an analog video display device. Accordingly, *Kim* also fails to teach or suggest determining the type of the video display device, or determining if the multimedia sink device supports only analog data, as recited in claim 21.

Accordingly, even if *Clark* and *Kim* are combined with other cited references, the alleged combination still fails to teach or suggest automatically configuring the coupling device, which includes, (a) determining if the multimedia source device supports only analog data, (b) setting an operational mode of the coupling device to analog if the multimedia source device supports only analog data, (c) determining if the multimedia sink device supports only analog data, (d) setting the operational mode of the coupling device to analog if the multimedia source device supports only analog data, and (e) setting the operational mode of the coupling device to digital if both of the multimedia source device and the multimedia sink device support digital data, as recited in claim 21.

Therefore, it is respectfully requested that the §103 rejections based on *Kori*, *Hulvey*, *Rogers*, *Clark* and *Kim*, be withdrawn.

### **Dependent Claims**

Claims 3-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kori* (U.S. Patent 6,963,968), *Hulvey* (U.S. Patent 5,940,137), *Rogers et al.* (U.S. Patent 5,786,844), *Clark*

(U.S. Patent 5,949,437) and *Kim* (U.S. Patent 6,577,303) as applied to Claim 22, and further in view of the “Digital Visual Interface (DVI), Revision 1.0”.

Claims 3-7 (and 22-23) depend from claim 21, and thus include all of the limitations of claim 21. The discussions above equally apply here. Since the base claim is patentable, the dependent claims are also patentable at least for the same reasons discussed above.

### **New Claims**

Claim 24 (and its dependent claims 23-27) is directed to a configurable coupling device corresponding to the method recited in claim 22. Claim 24 includes substantially the same distinctive features as claim 22, and thus the discussions above are equally applicable. Accordingly, the new claims are also patentable at least for the same reasons discussed above.

### **CONCLUSION**

In view of the foregoing, it is respectfully submitted that all pending claims are allowable. Should the Examiner believe that a further telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,

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